

1 ABSTRACT

2 A method of orally immunizing a host organism against gastrointestinal, mucosally-invasive
3 Mycobacterium avium subspecies paratuberculosis, including the steps of providing an enteric,
4 mucosally-adherent, non-systemically invasive Mycobacterium avium subspecies
5 paratuberculosis organism and orally administering the MAP organism to a host animal in an
6 immunizing dose and manner. Also, a vaccine that includes such a Mycobacterium strain and a
7 method of developing the strain.